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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/393,998	09/08/1999	CRAIG F. CULVER	IMM1P060.RE	3595
25696	7590	09/08/2005	EXAMINER	
OPPENHEIMER WOLFF & DONNELLY			CHOW, DOON Y	
P. O. BOX 10356			ART UNIT	
PALO ALTO, CA 94303			PAPER NUMBER	
			2677	
DATE MAILED: 09/08/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/393,998	<b>Applicant(s)</b> CULVER, CRAIG F.	
	<b>Examiner</b> Dennis-Doon Chow	<b>Art Unit</b> 2677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 24-62, 64-66, 74-78 and 84-94 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24-62, 64-66, 74-78, 84 and 85 is/are allowed.
- 6) ☒ Claim(s) 86 and 88-94 is/are rejected.
- 7) ☒ Claim(s) 87 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 86, 88, 89 and 94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Engel et al (5781172) in view of Gillick et al. (5530455).

Regarding to claims 86, 88 and 94, Engel disclose a trackball comprising: a housing; a user manipulatable member (rotatable ball) configured to be manipulated in two degrees of freedom; a sensor coupled to the member and operative to sense movement of the member in the two degrees of freedom; and an actuator operative to provide a feedback force to a use (15 Fig. 1; 35, Fig. 2; and 55, Fig. 3). The user manipulatable member (rotatable ball) can be rotated by a single digit of the user.

Engel does not disclose a trigger operative to move in a degree of freedom different from the two degrees of freedom.

Gillick, in the same input art, discloses a rotatable member (24, Fig. 5), and a trigger member (35, Fig. 5) mounted beneath the rotatable member. The trigger member generates a command signal when the rotatable member is pressed on the trigger member.

In light of Gillick, it would have been obvious to one of ordinary skill in the art to mount a trigger member beneath Engel's user manipulatable member (rotatable ball).

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By doing so, a command signal can be generated without removing the digit of the user from the manipulatable member..

Regarding to claim 89, the user manipulatable member can be rotated less than ninety degrees.

3. Claims 86, 88-91 and 94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marcus et al. (5643087) in view of Gillick et al. (5530455).

Regarding to claims 86, 88, 90-91 and 94, Marcus disclose an input device comprising: a housing; a user manipulatable member configured to be manipulated in two degrees of freedom; a sensor coupled to the member and operative to sense movement of the member in the two degrees of freedom; an actuator operative to provide a feedback force to a use (Abstract), and an arm member (21, Fig. 30) operable to rotate in rotary degrees of freedom. The user manipulatable member is rotated by a single digit of the user.

Marcus does not disclose a trigger operative to move in a degree of freedom different from the two degrees of freedom, and a sliding contract member.

Gillick, in the same input art, discloses a rotatable member (24, Fig. 5), a trigger member (35, Fig. 5) mounted beneath the rotatable member, and a sliding member allowing the rotatable member to slide down on the trigger member. The trigger member generates a command signal when the rotatable member is slid down on the trigger member.

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In light of Gillick, it would have been obvious to one of ordinary skill in the art to use Gillick's a trigger member including the sliding member in Marcus' input device. By doing so, a command signal can be generated without removing the digit of the user from the manipulatable member..

Regarding to claim 89, the user manipulatable member can be rotated less than ninety degrees.

4. Claims 92 and 93 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marcus et al. in view of Gillick et al. as applied to claims 86, 88-91 and 94 above, and further in view of Mikan (4825157).

Marcus does not disclose a centering element.

Mikan, in the same input field, discloses an input device comprising a center element including a spring for returning a user manipulatable member to a neutral position.

In light of Mikan, it would have been obvious to one of ordinary skill in the art to use Mikan's center element including the spring in Marcus's input device because of same reason as Mikan uses in his invention, which is to return the user manipulatable member to a neutral position.

***Allowable Subject Matter***

5. Claims 24-62, 64-66, 74-78, 84, and 85 are allowed.

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6. Claims 87 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis-Doon Chow whose telephone number is 571-272-7767. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on 571-272-3638. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

D. Chow  
August 11, 2005

Dennis-Doon Chow  
Primary Examiner  
Art Unit 2677

  
**DENNIS-DOON CHOW**  
**PRIMARY EXAMINER**